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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,495

07/19/2005

Yoshiaki Yamamoto

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NIXON & VANDERHYE, PC

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ARLINGTON, VA 22203

EXAMINER

OLADAPO, TAIWO

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

06/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,495

Applicant(s)

YAMAMOTO, YOSHIKI

Examiner

TAIWO OLADAPO

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 5/18/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 4 – 7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only, and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 2, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiddick et al. (US 5,173,204) in view of Ikejima et al. (US 2002/0072477) and further in view of Reidmeyer (US 6,291,407)

5. In regards to claim 1, Chiddick teaches solid lubricants used for lubricating sliding members and comprising a polymer medium which is selected from groups consisting of, i.e. polyethylene (column 3 line 65 – column 4 line 35). Chiddick teaches that the polymer medium can comprise and overlapping range of from 20 to 90% by weight (i.e. or volume) of the solid lubricant composition. Chiddick teaches that paraffinic or hydrocarbon wax can be present but does not teach the claimed range (column 7 lines 10 – 11). Chiddick does not teach the presence of melamine cyanurate in the solid lubricant. Ikejima teaches a grease composition for sliding parts comprising an overlapping range of from 0.1 to 20% of melamine cyanurate (or component c of reference) [0020, 0023, 0032 – 0038]. Melamine cyanurate is a thickener that is added to lubricants to add to promote solidification. Ikejima does not teach that the composition comprises a wax. Reidmeyer teaches a lubricant composition for sliding surfaces which comprises an organic or hydrocarbon material such as wax in an overlapping amount of from 10 % to 50% by weight (column 5 lines 12 – 20). It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the ingredients of Ikejima and Reidmeyer to the lubricating composition of Chiddick in order to create a lubricant having higher viscosity from the addition of a thickener and wax which improves stability and suspension action of the lubricant. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).
6. In regards to claim 2, Chiddick, Ikejima and Reidmeyer combined teach the solid lubricant wherein hydrocarbon wax is paraffin wax (Chiddick, column 7 lines 10 – 11).

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7. Claims 4 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiddick et al. (US 5,173,204) in view of Ikejima et al. (US 2002/0072477) in view of Reidmeyer (US 6,291,407) and further in view of Okaniwa et al (US 6,444,621)

8. In regards to claim 4, Chiddick, Ikejima and Reidmeyer combined teach the solid lubricant. Ikejima teaches that a lubricant for sliding parts can contain lithium soap but does not particularly teach the amount of metallic soap [Ikejima, 0003]. Okaniwa teaches a grease composition for a constant velocity joint or sliding part comprising 3 to 20 wt. % lithium or metallic soap (column 2 line 26). It would have been obvious for one of ordinary skill in the art at the time of the invention to have combined the ingredients taught by Okaniwa to the solid lubricant taught by the combined references of Chiddick, Ikejima and Reidmeyer since Okaniwa teaches a lithium soaps that are suitable thickening agents for solid lubricant of the combined invention. Although the reference teaches weight percentages, a percentage by volume of the ingredients would yield overlapping percentages of the claimed invention.

9. In regards to claim 5, Chiddick, Ikejima, Reidmeyer and Okaniwa combined teach the solid lubricant further comprising an overlapping range of from 1 to 8% of molybdenum dithiophosphate or phosphate (Okaniwa, column 2 lines 27 – 28).

10. In regards to claim 6, Chiddick, Ikejima, Reidmeyer and Okaniwa combined teach the solid lubricant further comprising PTFE in an overlapping range of from 0.1 to 10% (Okaniwa, column 2 lines 16 - 17).

11. In regards to claim 7, Chiddick, Ikejima, Reidmeyer and Okaniwa combined teach the solid lubricant and the sliding member comprising the lubricant as stated previously. Lubricants are embedded in pores or grooves of surfaces they lubricate.

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiddick et al. (US 5,173,204) in view of Ikejima et al. (US 2002/0072477) in view of Reidmeyer (US 6,291,407) and further in view of Hasegawa et al. (US 5,854,183)

13. In regards to claim 3, Chiddick, Ikejima, and Reidmeyer combined teach the solid lubricant but do not specifically teach further components such as higher fatty acids. Hasegawa teaches a grease composition for constant velocity joint or sliding part having higher fatty acids such as lauric acid, palmitic acid etc. as oiliness improver additive (column 10 line 62 – column 11 line 9). Hasegawa teaches that additives may be added singly or as a mixture of two or more and is desirably below 10% by mass. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hasegawa with that of Chiddick, Ikejima and Reidmeyer combined in order to increase the oiliness of the lubricant on the sliding parts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TO

/Glenn A Caldarola/
Acting SPE of Art Unit 1797